Local Area Unemployment Statistics (LAUS) Redesign

March 2005
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Overview

- Unemployment Measures – Why Change?
- Statewide Estimates Changes
- New Substate Methodology
- Geographic Changes
- Historical Revision
- Reference Links

Unemployment Measures

- National data: Current Population Survey (CPS)
  - Survey of 60,000 households by Census Bureau
- All subnational data: Local Area Unemployment Statistics
  - Cooperative Federal/State program
  - Model-based estimation
  - Over 7,000 areas in the nation
  - LAUS estimates are consistent with CPS measures of civilian labor force, total employment & unemployment, and unemployment rate
  - Used for analysis and to allocate more than $40 billion to States and areas each year

2005 marks the implementation of the most significant LAUS program redesign in 30 years

LAUS Program Redesign

LAUS Redesign Timing

- Redesign “need” recognized five years ago
- Research began in 1999 & completed in 2003
- Dual estimation was conducted in 2004
- Implementation in March 2005

Funded in FY 2001—a successful budget initiative

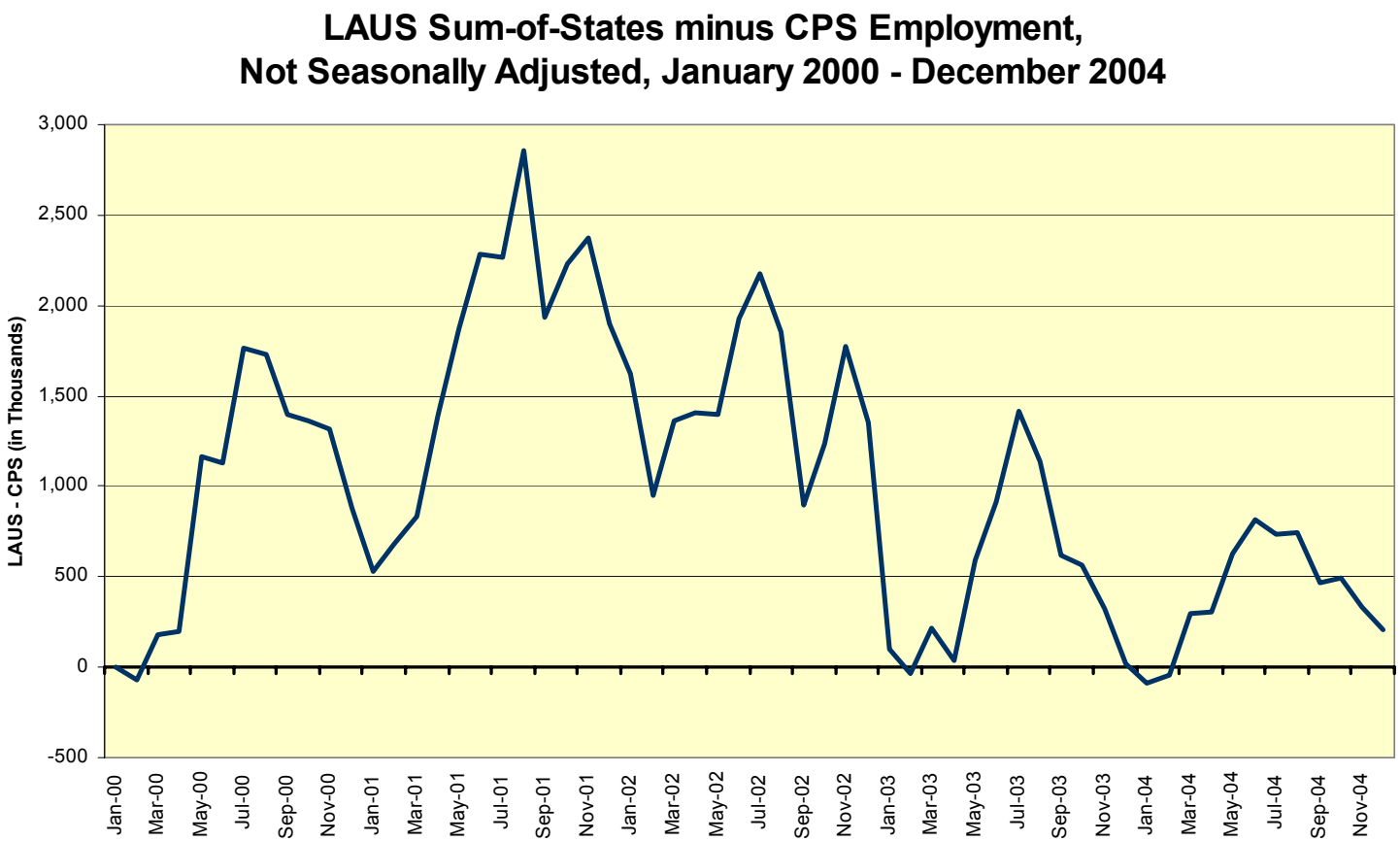
Current Modeling & Benchmarking Procedure

- What would CPS do?
- Time Series models first implemented in 1989
- Signal and Noise univariate models
- Benchmark model estimates to annual average CPS (by state)
- Seasonal adjustment performed externally

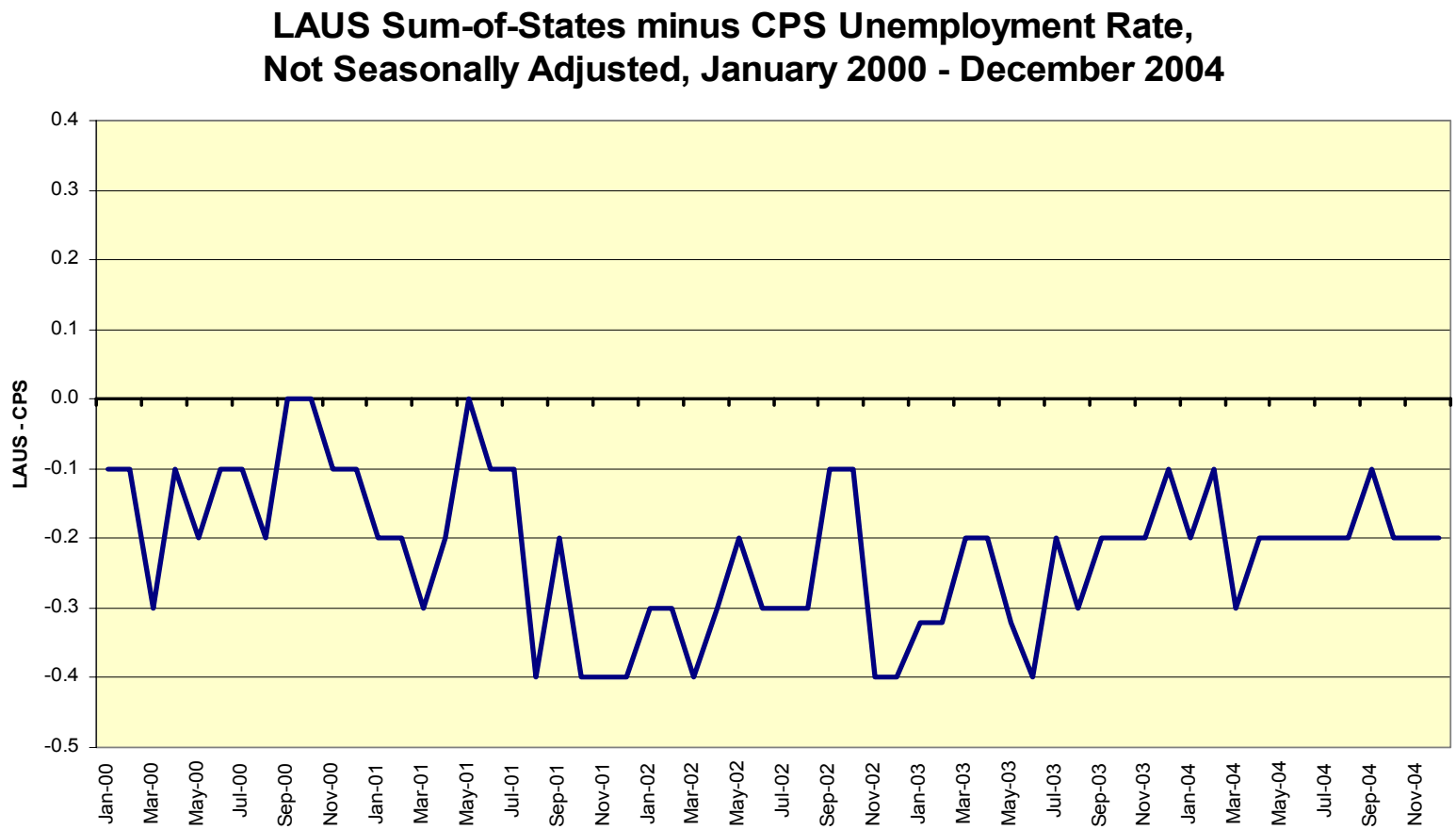
Current Model Limitations

- Large annual revisions occurred in a number of States each year
- In general, models tended to overestimate employment and underestimate unemployment and the rate on a current basis
- Annual benchmark caused December-January discontinuities
- Sum-of-States $\neq$ National
- “Shocks” to the economy not captured
- Lack of reliability measures

Sum-of-States ≠ National



Sum-of-States ≠ National



Statewide Estimates Changes

Improvements:

- Improved bivariate models for all states, DC, New York City, Los Angeles county, and NY & CA balance of state areas
- New models in six metropolitan areas and their respective balance of states
- Monthly error measures will be available
- Direct seasonal adjustment capabilities

Statewide Estimates Changes

Real-time Benchmarking:

- Benchmark to the CPS conducted every month
  (Current method benchmarking occurs only at the end of the year)
- End of the year revisions will be smaller
  (Will eliminate December-January discontinuities)
- Shocks to the economy will be reflected as they occur
- “Real time” benchmarking will enable over-the-year comparisons

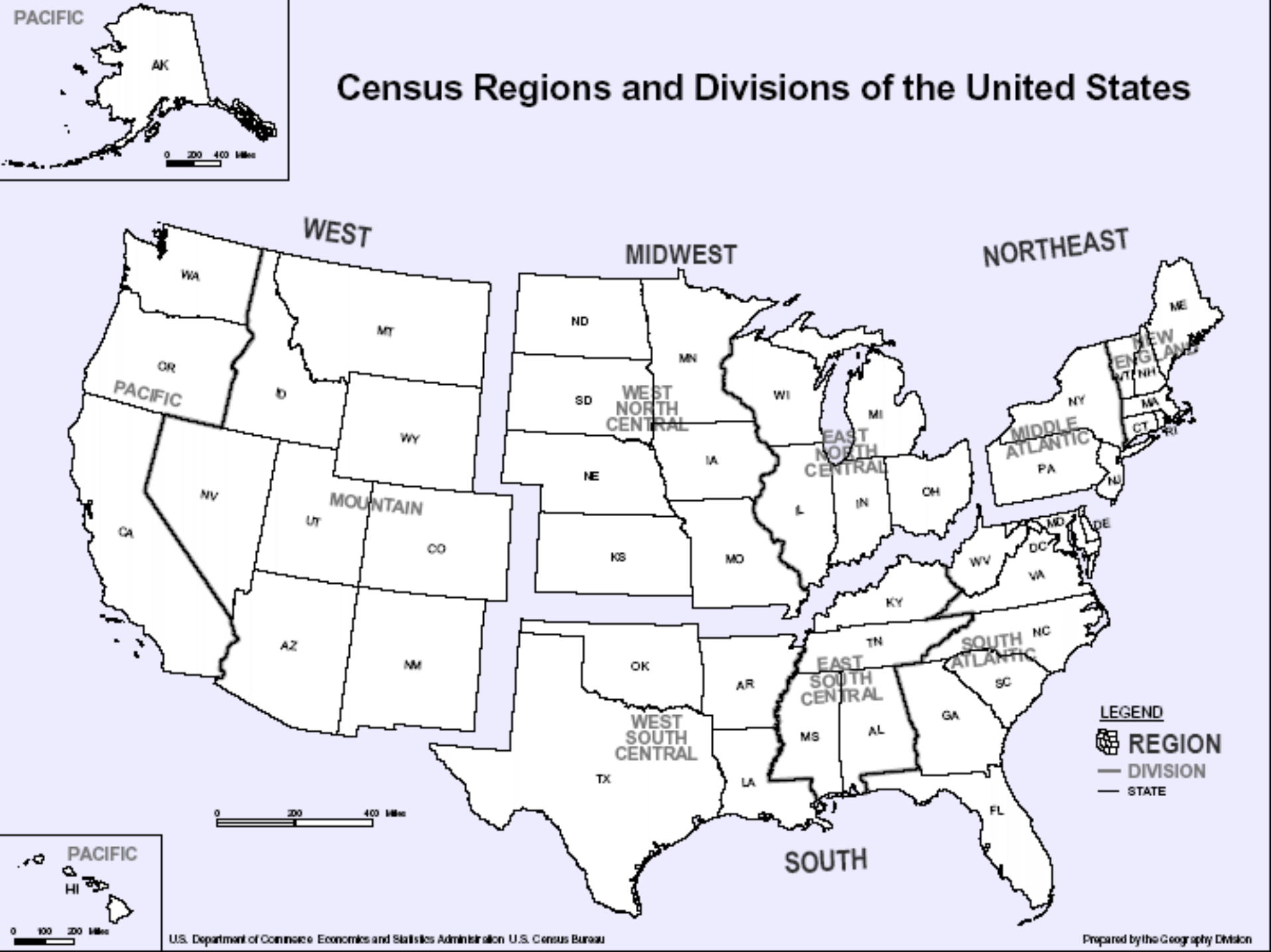
National & Division Controls

Model-based estimates developed for the 9 Census Divisions

- Division Model estimates controlled to the nation

Model-based estimates developed for the States

- State model estimates controlled to the Census Division


PACIFIC
AK
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Census Regions and Divisions of the United States
WEST
MIDWEST
NORTHEAST
SOUTH
PACIFIC
MOUNTAIN
WEST NORTH CENTRAL
EAST NORTH CENTRAL
NEW ENGLAND
MIDDLE ATLANTIC
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LEGEND
REGION
DIVISION
STATE
U.S. Department of Commerce Economics and Statistics Administration U.S. Census Bureau
Prepared by the Geography Division

Substate LAUS Methodology

Substate LAUS estimation requires building blocks for employment and unemployment

- Employment inputs include nonfarm employment from the Current Employment Statistics (CES) program
  - Definitional differences exist, requiring adjustments (CES is by place of work, LAUS is by place of residence)
- Unemployment inputs include UI claims, which similarly do not paint the full picture
  - Need to estimate for aspiring workers entering and re-entering the Labor Force

Methodology is changing for some—not all—of the inputs

Substate Methodology Changes - EMP

Place-of-work Residency Adjustment

- Old: Residency Adjustment Ratio
  - Based on commuting in the estimating area
- New: Dynamic Residency Ratio (DRR)
  - Dynamic residency ratios account for groups of 100 people or more commuting to nearby counties for work

    (Up to four commutation areas per place of residence)
- Major improvement for bedroom communities and areas with rapid employment growth

Substate Methodology Changes - EMP

2000 Census Employment for Substate Areas

- Census data will be used to “benchmark” other employment (self-employed, unpaid family workers, and private household workers)
- Census data will be used to “benchmark” agricultural employment

Substate Methodology Changes - UNEMP

New- and Re-entrant Unemployment Estimation:

- Current Methodology
  - Last updated 14 years ago
  - Underestimates new- and re-entrants for substate areas
  - Substate unemployment data not available for new- & re-entrants
  - Relates monthly national seasonal factors, adjusted to reflect the relative concentration of youth to the experienced unemployed and experienced labor force in the area

Substate Methodology Changes - UNEMP

New- and Re-entrant Unemployment Estimation:

- New Methodology
  - Uses an economic model to estimate statewide totals
  - Statewide unemployed distributed to substate areas
    - New entrants distributed based on the area's share of the population 16-19 years old
    - Re-entrants distributed based on the area's share of the population 20+ years old

Substate Methodology Changes

Disaggregation below county level

- Current: two methods
  - Census Share
    Ratio of city to county at last Census, static for 10 years
  - Claims-population method
    Preferred method, uses annual population and current UI claims
    (but requires claims data by city of residence)
- 2005: Strong push to convert to claims-population
  - 2000 Census problem with Group Quarters data
    Systematic overstatement of unemployment among residents
  - States not converting will have data footnoted
    (~ dozen states, including California)

Geographic Changes

New area types

- Micropolitan statistical areas
- Metropolitan divisions
- Combined statistical areas
- NECTA equivalents in New England

Changes to existing area types

- Metropolitan statistical areas
- Small labor market areas

Geographic Changes

Micropolitan statistical area

- At least one urban cluster with a population between 10,000 and 50,000, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties

Metropolitan Division

- A metropolitan statistical area containing a single core with a population of 2.5 million or more may be subdivided to form smaller groupings of counties, referred to as Metropolitan Divisions

Geographic Changes

Combined statistical area

- May comprise of any combination of metropolitan statistical areas and micropolitan statistical areas (i.e. two or more metropolitan statistical areas, a metropolitan statistical area and a micropolitan statistical area, two or more micropolitan statistical areas, or multiple metropolitan and micropolitan statistical areas)

NECTA equivalents in New England

- New England City and Town Areas
- An alternative to the county-based metropolitan and micropolitan areas in the 6 New England states

Geographic Changes

Metropolitan statistical area

- Areas that have at least one urbanized area of 50,000 or more population, plus adjacent territory that has a high degree of social and economic integration with the core as measured by commuting ties.
- Many areas have been redefined and/or changed titles
- Some additional areas (from 337 to 375)
- Some deletions

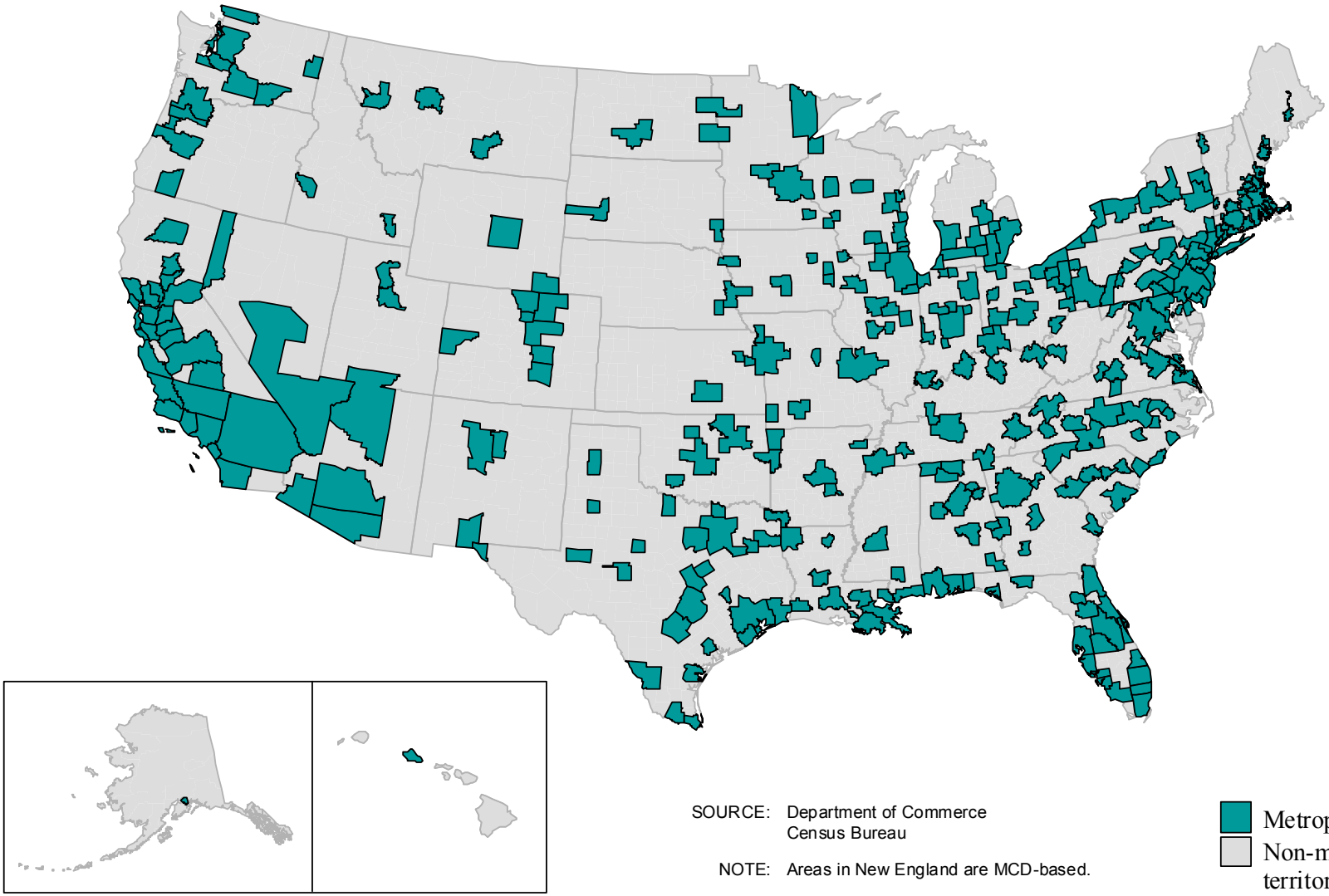
Geographic Changes

Small Labor Market Area (SLMA)

- Defined and designated by BLS
- No population criteria applied
- Additivity requires that no county be left behind
- Counties not in micros or metros are in SLMAs

MSAs and PMSAs in the U.S., based on 1990 standards and Census data

(Metropolitan area coverage = 818 counties outside New England;
578 New England MCDs)



SOURCE: Department of Commerce
Census Bureau

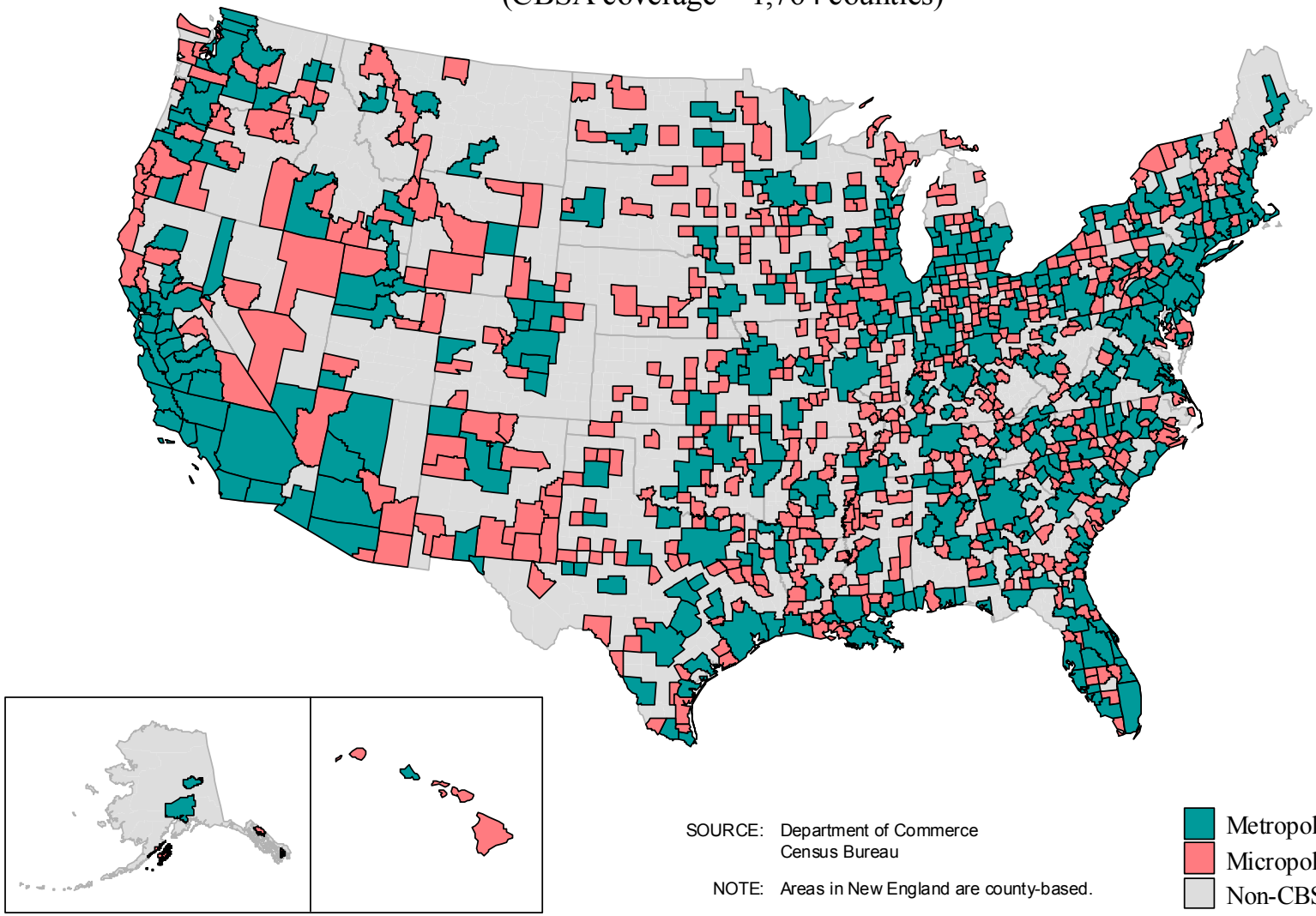
NOTE: Areas in New England are MCD-based.

Metropolitan

Non-metropolitan territory

Core Based Statistical Areas in the U.S.
by metropolitan/micropolitan status

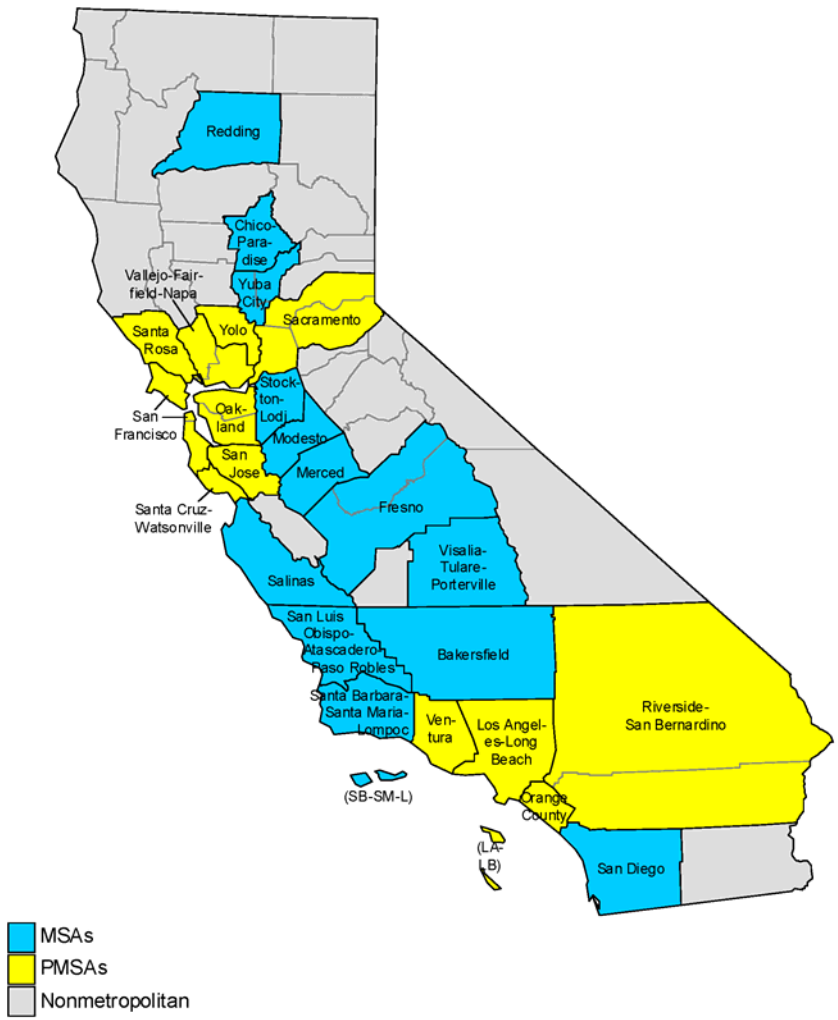
(CBSA coverage = 1,764 counties)



California Geography

Old: 25 Metropolitan Areas

13 Metropolitan Statistical Areas
And 12 Primary MSAs



California Geography

New:
26 Metropolitan areas
9 Micropolitan areas

Notable changes from1990:

- New: El Centro
  Hanford
  Madera (split from Fresno), Napa (split from Vallejo)
- Yolo absorbed into Sacramento
- LA & Orange combined (but each is a MD)
- SF & Oakland combined (but each is a MD)
- San Jose gains San Benito county

Historical Revision

- Statewide estimates
  (Seasonally Adjusted & Not Seasonally Adjusted)
  Back to 1976

- Newly modeled Metropolitan Areas/Divisions
  (Seasonally Adjusted & Not Seasonally Adjusted)
  Back to 1983

- Substate areas
  Back to 1990

Complete history for all areas through 2004 will be loaded in the BLS database on March 10, 2005

Historical Revision

Statewide estimates for 1976-2004:

- 3rd generation models with real-time benchmarking
- Replace historical series, both SA & NSA
  Add 2 years—1976-77 for most states (4 years for CA)

(January 2005 release will be on March 10)

Historical Revision

Newly modeled Substate areas for 1983-2004:

- Time series models controlled to State totals
- New historical series, both SA & NSA
- Six new areas are:
  Chicago, Miami, Seattle (Metropolitan Divisions)
  Cleveland, Detroit, New Orleans (Metropolitan Areas)
- May model more areas in the future

(January 2005 release will be on March 17)

Historical Revision

Substate data for 1990-99

- Create new geography (metro, micro, etc.)
- Ratio adjust to new state/model-based controls, create interstate areas
- Finalized data will be loaded to BLS database on March 10

Historical Revision

Substate data for 2000-2004: Two stages

- BLS will publish provisional data for 2000-2004
  - Same timeframe as 1990-1999 data (March 10)
  - Provide customers with a 15-year series on new geography and state controls
- BLS will publish final benchmarked data for 2000-2004
  - Between April and July 2005

(January 2005 release: Metropolitan areas on March 17; Micropolitan & other substate areas on March 24)

Historical Revision

Summary

- Switch from old geography to new geography on March 10
- No need to maintain old and new geography simultaneously
- Will have continuous 15-year series for customers
  (substate data will be provisional for 2000-04)
- January 2005 release dates:

  March 10 State
  March 17 Metropolitan
  March 24 all other areas

Reference Links

- Frequently Asked Questions and Answers
  http://www.bls.gov/lau/lausredesignqa.htm
- Benchmarking Paper
  http://www.bls.gov/lau/stmodelsgen3.pdf
- Place of Residency Research
  http://www.bls.gov/lau/dynamicra.htm
- New and Reentrant Unemployed Research
  http://www.bls.gov/lau/entrants.htm